Olive Switching Station
13355 San Fernando Road
Los Angeles
Los Angeles County
California

HABS No.CA-2664

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Buildings Survey
National Park Service
Western Region
Department of the Interior
San Francisco, California 94107

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HISTORIC AMERICAN BUILDINGS SURVEY

OLIVE SWITCHING STATION

HABS NO. CA-2664

Location: 13355 San Fernando Road (south side of San Fernando Road, just west of the intersection of Olden Street and San Fernando Road), on the grounds of the Sylmar Conversion Station in the Sylmar area in the northeast San Fernando Valley within the limits of the City of Los Angeles, Los Angeles County, California.

U.S.G.S. San Fernando 7.5' Quadrangle
UTM Coordinates: X Coordinate - 363259.422
Y Coordinate - 3797795.425
Latitude - 34 18 51
Longitude - 118 29 10

Present Owner: Department of Water and Power, City of Los Angeles

Present Occupants: Department of Water and Power, City of Los Angeles

Present Use: Electrical Switching Station Control House

Last Occupant and Use: Not Applicable

Significance: The Olive Switching Station is the oldest such facility of the Department of Water and Power (Department) of the City of Los Angeles. It was a key element of the initial power development along the route of the Los Angeles Aqueduct (Aqueduct). Constructed between 1916 and 1917 at the mid-point in the 115 kilovolt (kv) transmission line from San Francisquito Power Plant No. 1 to the central receiving station in the city (now Receiving Station A), the station ensured the reliability of the system by allowing a section of any circuit on which trouble developed to be cut out without affecting service. The station remains vital to the operation of the San Francisquito power plants No.1 and No. 2 as well as the facilities that bring water from the Owens Valley and Mono Basin to Los Angeles.

PART I. HISTORICAL INFORMATION

A. Physical History

1. **Date of erection:** Although the notice inviting proposals for the electrical equipment for the Olive Switching Station was issued in 1912 and the initial structural drawings were prepared in the following year, actual construction did not begin until 1916. Bids for steel and lumber were solicited in February and March, respectively, and work started in April. According to the progress reports of the Engineering Department of the Bureau of Power and Light, the station building, exclusive of the installation of the electrical equipment, was substantially completed in July 1916. The Olive Switching Station went into operation on or about April 10, 1917. (1)

2. **Architect:** Not known.

3. **Original and subsequent owners:** Since its completion in 1917, the station has been owned and operated by the Department or its predecessor, the Department of Public Service. The Department superseded the Department of Public Service under the new Los Angeles City Charter adopted in 1925.

4. **Builder, contractor, suppliers:** The Olive Switching Station was built by the construction forces of the Engineering Department of the Bureau of Power and Light under the direction of Assistant Electrical Engineer H. C. Gardett. Based on extant correspondence, Westinghouse Electric and Manufacturing Company (Pittsburgh, Pennsylvania) and Holabird Reynolds Electric Company of Los Angeles provided at least some of the electrical equipment for the station described in Specifications No. P-18 (July 1, 1912). (2) While there is no information on the construction materials suppliers, the bids received for standard hydraulic Portland cement suggest a likely source. The low bid for cement delivered at Sylmar, the site of the station, was from the Monolith Cement Plant. The plant was owned by the Department of Public Service and leased to the County of Los Angeles at this time. It provided most of the cement used in the construction of the Aqueduct. (3)

5. **Original plans and construction:** The Olive Switching Station was built as a two story 45'-6" x 49'-6" reinforced steel and concrete structure. The walls, floors, pilasters, and roof were of lightly reinforced steel, and the interior columns were of concrete-encased steel. The only distinctive design feature included in the original plans was the galvanized iron cornice that incorporated 92 9" blocks on the wall face. On the west side of the building, a 33'-4" metal staircase led to a small landing and entrance to the second floor. The entrance to the first floor was also on the west side. Two 26' transmission towers, each carrying one circuit of the double circuit

transmission, were anchored to the concrete roof. The drawings as well as a photograph taken shortly after the completion of the station show a boom for hoisting switches to the roof. The total cost, inclusive of the building and all electrical equipment, was $49,997. (4)

6. **Alterations and additions:** The earliest documented structural alteration to the Olive Switching Station was the construction of the battery room at the south end of the first floor of the building. The specifications (September 1, 1930) called for a 2" metal lath and plaster partition 8' high extending across the room and a 3" hollow metal lath and plaster ceiling from the wall of the building to the partition. The room was 21'-2" x 7'-6" x 8'-0" high. In addition, the specifications called for two (2) 18" x 24" ventilation openings to be cut in the outside wall; these were to have iron louvers with grill work. Additional electrical equipment associated with the remote control of the oil circuit breakers at the station from the San Fernando Power Plant was also installed at this time. (5)

In 1952 the station was expanded to meet the requirements of a transmission line that would bring power from the recently completed Owens Gorge Power Plants (the Control Gorge and Middle Gorge Power Plants went into service in April and May 1952, respectively) and the Aqueduct plants to the new Receiving Station J. This outdoor installation is referred to in the records as the Sylmar Switching Station; the original station, now called the "Old San Fernando Switching Station building," was altered as part of the project. A block wall was built to divide the first floor in half. Additional electrical equipment was installed along the west side wall to handle the switching functions of the station. The east side of the first floor was designated as the line patrol headquarters, from which crews were dispatched to survey/examine the transmission lines. (6)

An equipment plan drawing first prepared in 1952 shows the layout of the first floor. While the line patrol headquarters is divided into several smaller rooms, it is not clear whether this was done as part of the 1952 alterations. No permits are on file with the Los Angeles Department of Building and Safety. (7)

In 1956 the Sylmar Switching Station (outdoor) expanded. It became the terminus of the 230 kv transmission lines from the Owens Gorge Power Plants and the 115 kv lines from San Francisquito Power Plants No. 1 and No. 2. Power for Receiving Stations J and E was transmitted over new 138 kv lines from the station. The expansion again involved the installation of new electrical equipment in the original structure (now often referred to as the control house), but there is no record of any significant alterations to the building itself at this time. (8)

The partial conversion of the station for operation at 230 kv was authorized in 1965, and was completed in 1969. Again, the only apparent change that involved the control house was the installation of additional electrical equipment. This was seen as a temporary measure, however. The Department originally planned to remove all equipment and structures on the site, with the exception of the control house, by 1971, and to replace the function of the station with the Rinaldi Receiving Station and the Drinkwater Switching Station. The date was subsequently set 1974. (9)

Between 1917 and 1927, four cottages and two garages were built just to the south of the Olive Switching Station; there were also several sheds on the property. 24-hour access to the station was required for operation and emergency repairs. There is no information on the number of workers who manned the station at any given time. The fact that some of the electric equipment was remotely controlled from the San Fernando Power Plant after 1931 suggests a reduced need for on-site personnel. While line patrol crews may have used the cottages, it appears from the available records that they were primarily for workers from the nearby San Fernando Power Plant, which went into service in 1922. The cottages were either demolished at the site or removed in late 1968 or early 1969 because the conversion of the power plant to semiautomatic operation reduced the work force. (10)

Subsequent to the 1994 Northridge Earthquake, the second level was shored up on the western half of the building.

B. Historical Context

The Olive Switching Station was part of the earliest plans to develop hydroelectric power along the route of the Aqueduct. In December 1906 Ezra F. Scattergood, then Electrical Engineer of the Aqueduct, included the switching station in the transmission system that would bring power generated by the planned San Francisquito Power Plant NO. 1 to Los Angeles; the estimated cost was $40,000. (11) Following the creation of the Bureau of Aqueduct Power in 1909, a Consulting Board of Engineers (W. F. Durand, O.H. Ensign, Harris J. Ryan) was appointed to investigate the feasibility of the project. Its preliminary report to the Board of Public Works (February 12, 1910) called for a switching station at or near the proposed San Fernando Power Plant, halfway between San Francisquito Power Plan No. 1 and a central receiving substation in Los Angeles. (12)

Although the trend in the utility industry at the time was moving toward outdoor stations, the Olive Switching Station was designed as an indoor facility. Indeed, the plan for the complete Aqueduct power system, which called for two double circuit transmission lines from the San Francisquito Power Plant No. 1 to the city, envisioned a station comprised of two concrete buildings with a bus connection between them. The initial development, which Scattergood and the Consulting Board recommended in August 1911, required only a single double circuit line to bring power to Los Angeles, and only one building was needed

for the station. It is interesting to note that even in the early 1930s, the station as built was referred to as "one wing of the ultimate structure." Whatever its size, the Olive Switching Station was key to the reliable operation of the system that was to provide the bulk of the power to Los Angeles. Its function was to divide the transmission line into sections, making it possible to cut out any single circuit in the event of trouble. The station is also critical to Los Angeles' water supply. Water from the Owens Valley and the Mono Basin, which is brought to the city by the two Los Angeles Aqueducts (the first Aqueduct went into service in 1913; the second Los Angeles Aqueduct, sometimes referred to as the "Second Barrel," went into operation in 1970), must pass through San Francisquito Power Plants No. 1 and No. 2. If the Olive Switching Station is not operational, the flow of water through the Aqueduct would stop. (13)

The initial planning for the Olive Switching Station fell to the Bureau of Aqueduct Power, which was created under the Board of Public Works in 1909. The Bureau invited proposals for the electrical equipment for the station on July 1, 1912, and prepared the initial structural drawings on December 1, 1913. The station equipment reflected state-of-the-art technology, and was based on an extensive review of extant technical literature, on-site inspections of hydroelectric power systems across the country, and the expertise of the nation's leading transmission engineers, most notably, Professor Harris J. Ryan of Stanford University. (14) Although the equipment was purchased and delivered by the Spring of 1913, the actual start of work on the station was still several years away. The entire power project was hampered by a shortage of funds, attributed in large part to the opposition of private utility companies to municipal ownership.

All work at San Francisquito Power Plant No. 1 was shut down in January 1913 due to a lack of money. That April a $6.5 million power bond issue did not receive the necessary two-thirds vote, mainly because of the opposition organized by the Southern California Edison Company and the Los Angeles Gas & Electric Corporation. The bulk of the revenues from the bonds (over $5 million) was earmarked for either the purchase of the companies' distribution systems or the construction of a city-owned system. The people of Los Angeles overwhelmingly favored municipal distribution over leasing power sites to private interests in a 1911 straw vote. Still, the companies refused to sell, and wanted to purchase power generated at the Aqueduct plants for resale to customers. This clash between public and private powers led to further delays. An essentially identical bond measure was approved in May 1914, but became the subject of litigation that dragged on for a year. During this period, the Bureau of Aqueduct Power was forced to borrow money from the City General Fund and to take advances from the 1914 Bond Fund to meet payroll and miscellaneous expenses. The State Supreme Court ultimately upheld the validity of the bonds in June 1915, and construction resumed on San Francisquito Power Plant No. 1, the transmission line from the power plant to the Olive Switching Station, and the Los Angeles receiving station as funds from the sale of the bonds became available. (15) Possibly because of the difficulties encountered in securing the rights-of-way for the transmission line from the station to the City, the station was the last element of the project started. Work began in April 1916, and the station was put into service in April 1917. (16)

The original name of the facility was the San Fernando Switching Station because of its proximity to the town of San Fernando. This is confirmed by the earliest specifications and one-line diagram as well as references in annual reports. After 1930, however, it became more common to refer to the station as the Sylmar Switching Station. This apparently was an informal change, reflecting the fact that it was in the community of Sylmar and possibly to avoid confusion with the San Fernando Power Plant. (17) The outdoor installation constructed on land just west of the original structure in 1952 was officially designated as the Sylmar Switching Station. While the authorization records refer to the original structure as the "Old San Fernando Switching Station building," it was in fact the control house that with the outdoor equipment comprised a facility now known as the Sylmar Switching Station. (18) In 1966, the switching station associated with the Sylmar High Voltage Direct Current (HVDC) Converter Station, the southern terminus of the Pacific Northwest-Pacific Southwest Intertie, was named the Sylmar Switching Station. The former Sylmar Switching Station was renamed the Olive Switching Station. (19)

The expansion of the facilities at the station during the 1950s and 1960s reflected the development of new power sources such as the Owens Gorge Power Plants, the Pacific Northwest-Southwest Intertie, and the Valley Generating Station. It was the product of a careful analysis of load demand and system requirements by Department engineers. This work was largely carried out by the System Planning Committee. Its two reports--"Five-Year Construction Requirements Transmission Lines and Receiving Stations, 1951-1956" (1951) and "Future Development of Power System Including 230-kv Conversion Program" (1963)--were the basis for the changes to the station. (20)

Until 1971, the northeast San Fernando Valley was an area of historically low seismic activity. The Sylmar Earthquake (February 9, 1971) damaged 80% of the outdoor equipment, including oil circuit breakers, air circuit breakers, and transformers, and totally shut down the Olive Switching Station. As DWP Engineer Lyall Stinson recalled, the large transformer for the Owens Gorge and San Francisquito transmission lines had been shaken off their mounts and spilled transformer oil. (21) Damage to the original structure (control house), however, was limited to cracked walls and ceilings and chipped concrete supports due to the use of an incomplete horizontal diaphragm on the second floor of the building. The fact that the quake caused only minor structural problems was attributed to the regular shape of the building and the adequacy of the reinforcing steel. (22)

Some of the damage to the building was repaired following the 1971 Sylmar Earthquake. An evaluation of the building in 1990 found no serious weakening of the structural elements, but recommended constructing new concrete slabs in the second floor opening. Questions were also raised in the report about the original stairway on the west side of the structure and the partition wall on the first floor that separated the control room and the old line patrol headquarters. A work order for modifications to the control house was approved in January 1991, and subsequently canceled. (23)

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural Character: The building is a simple reinforced steel and concrete industrial structure with a minor amount of decoration, typical of the early twentieth century. Its form is a nearly perfect cube, 45'-6"x49'-6"x49'-3" in height. Decoration is of two types: 1) and expression of building structure; and 2) applied detail. Structural expression includes the thickened base upon which the building appears to rest and the framing of the walls by the engaged corner columns. Applied detail includes a galvanized iron cornice (187'-4" total length) and a raised square inscribed within the frame of each elevation, formed by the base, engaged columns and cornice. Each elevation has symmetrically arranged fenestration. These windows are metal framed industrial sash style. Doors and service openings, located on two sides of the building, are arranged asymmetrically. The building surface is monochromatic and smooth.

2. Condition of Fabric: The overall condition of the building is fair.

roof: The roof appears to be in fair condition.

walls: The walls of the structure have experienced major damage as a result of the 1994 Northridge Earthquake and subsequent aftershocks. Several large cracks are present in the walls, columns and beam to column connections.

windows: A majority of the windows are broken or cracked.

B. Description of Exterior:

1. **Overall dimensions:** The building is two stories, each 45'-6" by 49'-6". The overall height of the building is 49'-3" with the first floor 27'-5" and the second floor 21'-10". The second floor is discontinuous on the south-east and north-east sides by approximately 6'-4" making the total width 32'-10".

2. **Foundations:** The building floors are lightly reinforced with twisted square steel reinforcing bars or round bars. A 2'-6" wide reinforced concrete footing a depth of 2'-7" is provided under the exterior walls. The exterior columns have a 5'-6" square reinforced concrete footing at a depth of 4'-6" below grade. The interior columns have a 6'-0" square footing.

3. **Walls:** The building walls and columns are lightly reinforced with twisted square steel reinforcing bars or round bars. The bottom 6'-11" of the first floor walls are 15 inches thick and the remaining height reduces to 9 inches. The second floor walls are 6 inches thick. All exterior walls are concrete reinforced with 1/2" diameter round bars at 3'-0" on center. The exterior

columns are concrete reinforced with 3/4" twisted square reinforcing bars wrapped with #6 wire. The second floor beams are steel channels and wide flange sections encased in concrete and the interior columns are latticed steel channels encased in concrete. The beams are connected to the walls by government connections: reinforcing steel threaded through drilled holes at the ends of the beams. Beam to column connections are made by rivets. The interior columns are constructed of 10" by 25 pound and 6" by 10.5 pound channel on the first and second floor respectively, latticed by bars connected by rivets.

4. **Structural systems, framing:** The vertical loads are carried by the steel encased beams and interior columns and the exterior reinforced concrete beams and walls. The building was constructed in 1916-1917 before seismic design was codified. Therefore, the building does not have an adequate lateral load carrying system. Currently, the lateral loads are taken by the lightly reinforced concrete walls. The second floor discontinues on the southeast and north-west sides of the building, preventing the second floor loads to travel to the walls in that direction.

5. **Porches, stoops, balconies, bullheads:** The structure does not contain any porches, stoops, balconies or bullheads.

6. **Chimneys:** The structure does not contain any chimneys.

7. **Openings:**

   a. **Doorways and doors:** There are two openings to the structure. A double door on the western side of structure provides the main access to the interior. These doors are constructed of steel. A second set of double steel doors are located on the south side of the building.

   b. **Windows and shutters:** The structure contains a total of 7 large multi-paned windows and 7 small multi-paned windows. These windows are metal framed industrial sash style. No hardware or trim of note exist in these windows.

8. **Roof:**

   a. **Shape, covering:** The roof is a flat and square shape. It is made of concrete. The actual roofline is not visible from the ground as it is surrounded by the exterior walls.

   b. **Cornice, eaves:** The only significant architectural feature of the building is the galvanized iron cornice that encompasses the building at the roof-line. The total length of the cornice is 187'-4" and is located along the entire upper perimeter of the building.

c. **Dormers, cupolas, towers:** There are no dormers, cupolas, or towers in the building. The roof of the structure houses two transformer towers.

C. Description of Interior:

1. Floor plans:

The building is two stories, each 45'-6" by 49'-6". An interior wall divides the building into two equal sides. The interior wall is constructed of unreinforced 8"x8"x16" clay tile block. The block has no structural value and is a potential danger during seismic events.

First Floor: The first floor is divided into two equal sides by the interior wall. The western side of this floor houses the controls for the switching station, and is the only room in the structure that is currently occupied. This floor contains switches and meters on the north, south and east sides of the room. A small bathroom area is located in this room in the southern-eastern corner. The second room of the first floor is empty, and is characterized by concrete flooring and walls as described above. A small bathroom area is located in the southwestern corner of this room.

Second Floor: The second floor of the structure is also divided equally by an interior wall. Access to the second floor is not possible due to the damage sustained in the 1994 Northridge Earthquake, and the subsequent shoring-up of the floor. The second floor is discontinuous on the south-east and north-east sides by approximately 6'-4" making the total width 32'-10". A hand rail is provided on the perimeter to prevent falling from the second floor.

2. **Stairways:** The access to the second floor is provided by a stairway and switch landing platform attached to the south-east side of the building. The stairway is on a 1'-4-17/32" to 1'-0" slope. The width of the stairway is 2'-6". Each step is made from a 4" by 5.25 pound channel and the handrail is 1 inch diameter pipe place 1'-3" above the step.

3. **Flooring:** The flooring of the structure consists of concrete slab, with no finish materials.

4. **Wall and ceiling finish:** The interior columns are constructed of 10" by 25 pound and 6" by 10.5 pound channel on the first and second floor respectively, latticed by bars connected by rivets. There are no notable decorative details on the interior walls and ceiling.

5. **Openings:**

   a. **Doorways and doors:** A small doorway provides access between the first and second rooms of the first floor. This doorway is a concrete "cut-out" of the wall that separates the first floor rooms.

   b. **Windows:** All interior window trim consists of concrete slab.

6. **Decorative features and trim:** None.

7. **Hardware:** None.

8. **Mechanical equipment:**

   a. **Heating, air conditioning, ventilation:** The structure does not contain heating, air conditioning, or ventilation systems.

   b. **Lighting:** The station is equipped with standard/contemporary florescent lighting fixtures.

   c. **Plumbing:** The station contains two small toilet areas and contains standard plumbing.

9. **Original furnishings:** None.

D. **Site:**

1. **General setting and orientation:** The building is oriented to the southwest. The structure is located within the Sylmar Converter Station East. The Sylmar Converter Station consists of a multitude of electrical transformers, oil tanks, and structures. Immediately to the east of the Station is a general contractor storage yard. The topography of the site is flat.

2. **Historic landscape design:** There is no landscaping of note associated with the Station.

3. **Outbuildings:** Currently, there are no outbuildings associated with the Station. Between 1917 and 1927, four cottages and two garages were built just to the south of the Olive Switching Station; there were also several sheds on the property. While line patrol crews may

have used the cottages, it appears from the available records that they were primarily for workers from the nearby San Fernando Power Plant, which went into service in 1922. The cottages were either demolished at the site or removed in late 1968 or early 1969 because the conversion of the power plant to semiautomatic operation reduced the work force. (24)

PART III. SOURCES OF INFORMATION

A. Structural drawings:

Drawing No. B-29, Stairway, Landing, and Boom for Hoisting Switches, Sylmar Switching Station [Olive Switching Station], 1 December 1913, Department of Water and Power.

Drawing No. B-30, Details of Transmission Line Tower, Sylmar Switching Station [Olive Switching Station], 1 December 1913, Department of Water and Power.

Drawing No. B-31, Details of Transmission Line Tower, Sylmar Switching Station [Olive Switching Station], 1 December 1913, Department of Water and Power.

Drawing No. B-36, Details of Transmission Line Tower, Sylmar Switching Station [Olive Switching Station], 1 December 1913, Department of Water and Power.

Drawing No. J12-EA41, Equipment Plan, First Floor, Control House, Olive Switching Station, 24 May 1952; Rev. 26 22 April 1993, Department of Water and Power.

Shows equipment installed prior to 1993, and likely layout of first floor with partition dividing the area in the control and relay room.

Drawing No. J12-SA2, First Floor Plan, Olive Switching Station, 1 December 1913; Rev. 3, 27 April 1994, Department of Water and Power.

Shows changes to first floor in 1952 and proposed alterations (temporary roof plan) following the 1994 Northridge Earthquake.

Drawing No. J12-SA32, Transmission Line Tower, Sylmar Switching Station, 1 December 1914, Department of Water and Power.

Drawing No. J12-SA35, Foundation Plan and Wall Sections, Olive Switching Station, 1 December 1913, Department of Water and Power.

Drawing No. J12-SA36, Steel Frame for Building, Olive Switching Station, 1 December 1913, Department of Water.

Shows roof location of hoist for switches.

Drawing J12-SA37, Sections and Details, Olive Switching Station, 17 March 1952, Department of Water and Power.

Drawing No. J12-SC7, Concrete Details, Olive Switching Station, 1 December 1913, Department of Water and Power.

Shows details of galvanized iron cornice and provides information on reinforcing steel.

B. Early views:

Photograph, Sylmar Switching Station [Olive Switching Station], Photographer James Bledsoe, LADWP-506 (Original Number 2639), April 1917. Original Glass Negative (8 x 10) in James Bledsoe Collection, Department of Water and Power.

Photograph shows west side of station with stairway leading up to second floor and hoist on roof; roof strain transmission towers with conductors from San Francisquito Power Plant line are clearly shown.

Photograph, Sylmar Switching Station [Olive Switching Station], Photographer unknown, LAWDP 3-1684, Undated [circa 1930]. Copy negative in DWP Photograph Collection, Department of Water and Power.

Photograph shows east side of the station; only a portion of the roof transmission towers are visible; transmission tower possibly for San Fernando Power Plant is seen. A sign in front of the structure reads, "Municipal Aqueduct Light & Power Switching Station."

Photograph, Olive Switching Station, Photographer unknown, LADWP 71-5113, 10 February 1971. Original slide and copy negative in DWP Photograph Collection, Department of Water and Power.

Aerial view of the station following February 9, 1971 Sylmar Earthquake; shows damage to outdoor equipment, oil spill from transformers, and relationship of control house (original Olive Switching Station building) to rest of the facility.

Map, Structural Plan, Olive Switching Station, Drawing No. J12-SA28, 3 May 1955, Rev. 22, 25 November 1986, Department of Water and Power.

Shows relationship of control house to outdoor equipment.

Map, Site Development, Olive Switching Station, Drawing No. J12-CA25102, Rev. 19, 5 January 1989, Department of Water and Power.

Map, Building Locations and Driveways, Olive Switching Station, Drawing No. J12-CO343, Rev. 9, 21 February 1949, Department of Water and Power.

C. **Interviews:** No oral interviews were conducted as part of the preparation of this report.

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____. to Ivan L. Bateman, 1 April 1955. Power System Services Division Records, PSF51-940. Department of Water and Power.

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"RS J to Sylmar Line Energized." Intake (December 1952): 14-15.

"Work Underway on Transmission Line Between Sylmar and RS J." Intake (November 1952).

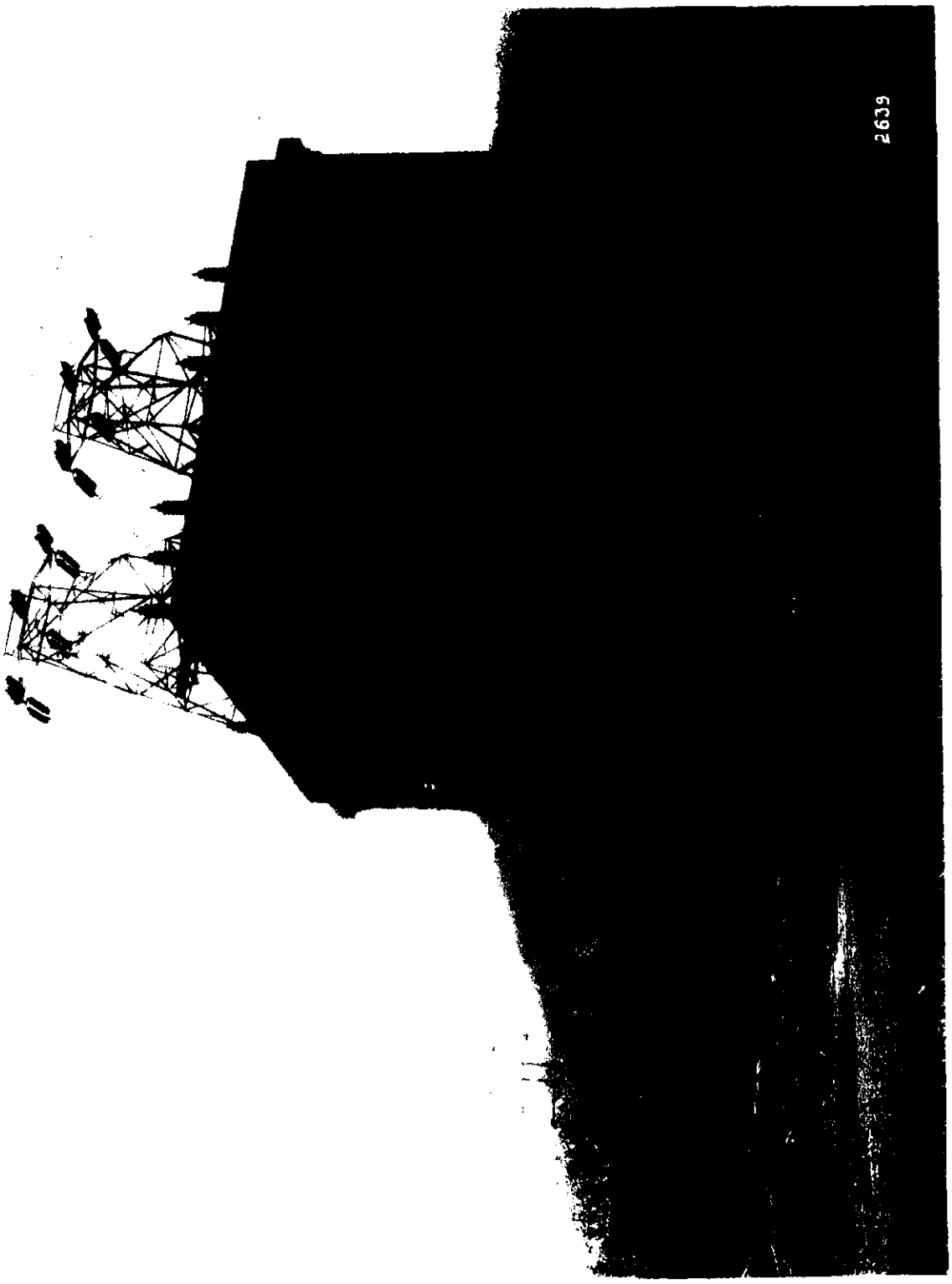
E. **Likely sources not yet investigated:** None.

F. **Supplemental material:** Supplemental materials associated with this report include color xeroxes of 3 early views. The descriptions and color xeroxes of these historic views are provided in the following pages.

Early View #1 Photocopy of photograph (original print located at the Los Angeles Department of Water and Power Headquarters). James Bledsoe, Photographer, April 1917. VIEW OF SOUTHEAST SIDE OF SWITCHING STATION WITH UNIDENTIFIED PERSON AT TOP OF EXTERIOR STAIRWELL.

Early View #2 Photocopy of photograph (original print located at the Los Angeles Department of Water and Power Headquarters). Photographer unknown. Date unknown. VIEW OF NORTHEAST SIDE OF SWITCHING STATION FROM RAILROAD TRACKS.

Early View #3 Photocopy of photograph (original print located at the Los Angeles Department of Water and Power Headquarters). Photographer unknown. February 10, 1971. AERIAL VIEW OF SOUTHWEST SIDE OF SWITCHING STATION AND SURROUNDING STRUCTURES.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EARLY VIEW #2

OLIVE SWITCHING STATION
HABS NO. CA-2664
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EARLY VIEW #3

PART IV. PROJECT INFORMATION

The Historic American Buildings Survey has been prepared in response to the request of the Federal Emergency Management Agency for funds related to the demolition, and construction of the Olive Switching Station.

Demolition and reconstruction of the station is planned immediately upon acceptance of this report from State Historic Preservation Office.

Part I was prepared by Paul Soifer of The Bancroft Group and Mark Williams of the Los Angeles Department.

Part II was prepared by Paul Soifer of The Bancroft Group and Mark Williams of the Los Angeles Department in association with Mr. Tim Gnibus, Mr. Jim Curtis and Ms. Jayna Morgan of EDAW, Inc.

Part III was prepared by Paul Soifer of The Bancroft Group and Mark Williams of the Los Angeles Department.

Part IV was prepared by Mr. Tim Gnibus and Ms. Jayna Morgan of EDAW, Inc.

These records were prepared during November and December of 1994.

NOTES

1. Specification No. P-68 for Furnishing Structural Steel and Castings, 18 February 1916 and Specification No. P-75 for Lumber, 14 March 1916, Operating Engineering Records (Series II), WP23-11:1, Power Operating and Maintenance Division Historical Records, Department of Water and Power, Los Angeles, CA (DWP); "Report of Costs and Progress by the Engineering Department of the Bureau of Power and Light as of March 31, 1916," (9 May 1916) and "Report of Costs and Progress by the Engineering Department as of July 31, 1916," (2 October 1916), Ephemera Collection, File V:2, Historical Records Program Library (HRPL), DWP; Sixteenth Annual Report of the Board of Public Service Commissioners (1917), 41, 43.

2. Ezra F. Scattergood to E. V. Harding (Chief Accounting Officer), 5 June 1913 and Scattergood to Edward Johnson, 16 June 1913, Reports to the Board of Public Works, Chief Electrical Engineer, 1909-1914, Los Angeles Aqueduct Construction Records, Los Angeles Aqueduct Division Historical Division, DWP

3. Specification No. P-90-7 for Portland Cement, 5 May 1916, Operating Engineering Records (Series II), WP23-11:1, On the Monolith Plant, see Department of Public Service, Complete Report on Construction of the Los Angeles Aqueduct (Los Angeles: Department of Public Service, 1916), 98-110.

4. Drawing No. J12-SC7, Concrete Details, Olive Switching Station, 1 December 1913, Drawing No. J12-SA36, Steel Frame For Building, Olive Switching Station, 1 December 1913, and Drawing No. B-29, Stairway, Landing, and Boom for Hoisting Switches [Olive Switching Station], 1 December 1913, Drawing No. J12-SA32, Transmission Line Tower, Sylmar Switching Station [Olive Switching Station], 1 December 1914, DWP, Photograph, Sylmar Switching Station [Olive Switching Station], 1917, James Bledsoe Collection, LADWP-506, DWP, Bureau of Power and Light, Engineering Department, Cost Division, "Recapitulation and Exhibit of Completed Costs of the 1910 and 1914 Bond Fund Construction" (1919), Historical Records Program Library, DWP.

5. V. Lankovsky, "Structural Specifications for Construction 33 KV Outdoor Rack at San Fernando Power Plant and Remodeling San Fernando Power Plant Building and Remodeling Olive Switching Station Building," 1 September 1930," Power Design and Construction Division Records, AO69-171, DWP; Permit No. 25512 to Alter, Repair or Demolish, 22 October 1930, Department of Building and Safety, City of Los Angeles.

6. J. P. Stratford to William S. Peterson, 1 February 1952, J. D. Laughlin to T. M. Blakeslee, 12 June 1952, Stratford to Peterson, 23 July 1952, Power System

Services Division Records, PSF51-940, DWP; "Work Underway on Transmission Line between Sylmar and RS J," Intake (November 1952), 6 and "RS J to Sylmar Line Energized," Intake (December 1952), 14-15.

7. Drawing No. J12-EA41, Equipment Plan, First Floor, Olive Switching Station, 21 May 1952; Rev. 26, 22 April 1993, DWP.

8. A. L. Williams to Ivan L. Bateman, 1 April 1955 and Williams to Blakeslee, 12 January, 1956, PSF51-940; Fifty-fifth Annual Report of the Board of Water and Power Commissioners (1956), 12-13; "Power Facilities Expanded at Sylmar Switching Station," Intake (January 1956), 17.

9. Williams to Board of Water and Power Commissioners, 3 July 1964, Stratford to Blakeslee, 24 September 1965, Edgar L. Kanouse to Distribution, 28 February 1968, R. W. Eick to W. A. Anderson, 22 August 1969, Power System Services Division, PSF51-1094, DWP.

10. Glenn M. Green to Lee L. Burnside, 11 June 1968, PSF51-1094.

11. Scattergood, "Report on Power Plants" in First Annual Report of the Chief Engineer of the Los Angeles Aqueduct to the Board of Public Works (15 March 1907); Scattergood to Board of Public Works, 6 December 1912, Reports to Board of Public Works-Chief Electrical Engineer, Los Angeles Aqueduct Construction Records.

12. Preliminary Report of the Consulting Board of Engineers of the Bureau of Aqueduct Power (February 12, 1910), 11.

13. On the trend toward outdoor stations see Data Files - Substations, 1916-1920, WP28-8:14, Ezra F. Scattergood Papers, Power System Services Division Historical Records, DWP; "Annual Report of the Engineering Department of the Bureau of Aqueduct Power," 25 July 1913, 20; O. W. Holden, "Aqueduct Power" undated [1933?], Department of Water and Power Library Vertical File, Typescript, "Report of Special Committee of Engineers on Municipal Power and Light Project of the City of Los Angeles" (16 February 1917).

14. Specifications No. P-18 for Auxiliary Electrical Equipment, 1 July 1912, Operating Engineering Records (Series II), WP23-10:9, and see, for example, Drawing No. J12-SA35, Foundation Plans and Wall Sections, Olive Switching Station, 1 December 1913, DWP.

15. "Annual Report of the Engineering Department" (1913), 16; Scattergood, "Summary of Annual Report of Bureau of Aqueduct Power," 26 June 1913;

Fourteenth Annual Report of the Board of Public Service Commissioners (1915), 55-56; Scattergood to Board of Public Works, 17 October 1914, Reports to Board of Public Works-Chief Electrical Engineer, Los Angeles Aqueduct Construction Records; J. Gregg Layne, Water and Power for a Great City (Los Angeles: Department of Water and Power, 1956), 192.

16. Fifteenth Annual Report of the Board of Public Service Commissioners (1916), 36.

17. See Specifications No. P-18 for Auxiliary Electrical Equipment and Drawing B-9, Wiring Diagram for Olive Switching Station, 12 June 1912 in same and Twenty-ninth Annual Report of the Board of Water and Power Commissioners (1930), 56. For name change see "In Case You Don't Know," Intake (April 1934), 22 and T. A. Panter to Clyde Errett, 20 September 1933, PSF51-940.

18. See above Note 6.

19. E. G. Olmstead to W. A. Sells, 15 November 1966, PSF51-1094.

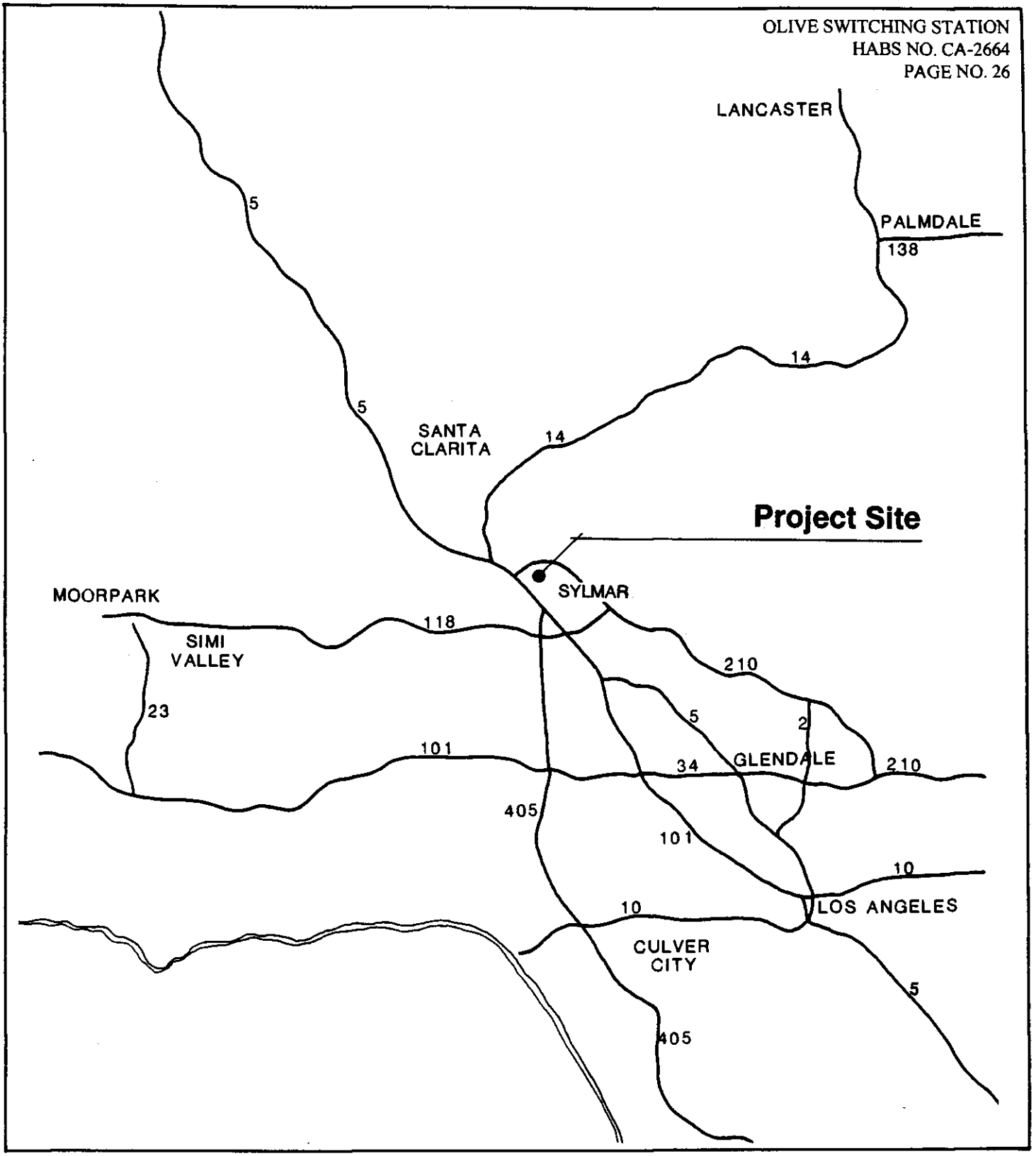
20. "Report on Five-Year Construction Requirements Transmission Lines and Receiving Stations, 1951-1956," by O. L. Sidenfaden, Chairman, System Planning Committee (April 1951), System Planning Committee Report No. 8 and "Future Development of Power System Including 230-KV Conversion Program," by Carl Kist, Chairman, System Planning Committee (May 1963), System Planning Committee Report No. 13.

21. B. V. Palk and S. M. Nekota, "San Fernando Earthquake of February 9, 1971: Effects on Power System Operation and Electrical Equipment" (October 1971), 14, 33; Lyall Stinson, "Growth and Development of the Power System: An Interview with Lyall Stinson", 236-237, Power System Oral History Project, DWP.

22. Kenneth O. Cartwright et al, "San Fernando Earthquake of February 9, 1971: Effects on Power System Operations and Facilities" (October 1974), 28.

23. Rodney J. Clark to Marciano Lopez, 4 June, 1990, Power Design and Construction Division Records, Microfilm BF 0208 0761, DWP.

24. See above Note 10.



Source: EDAW

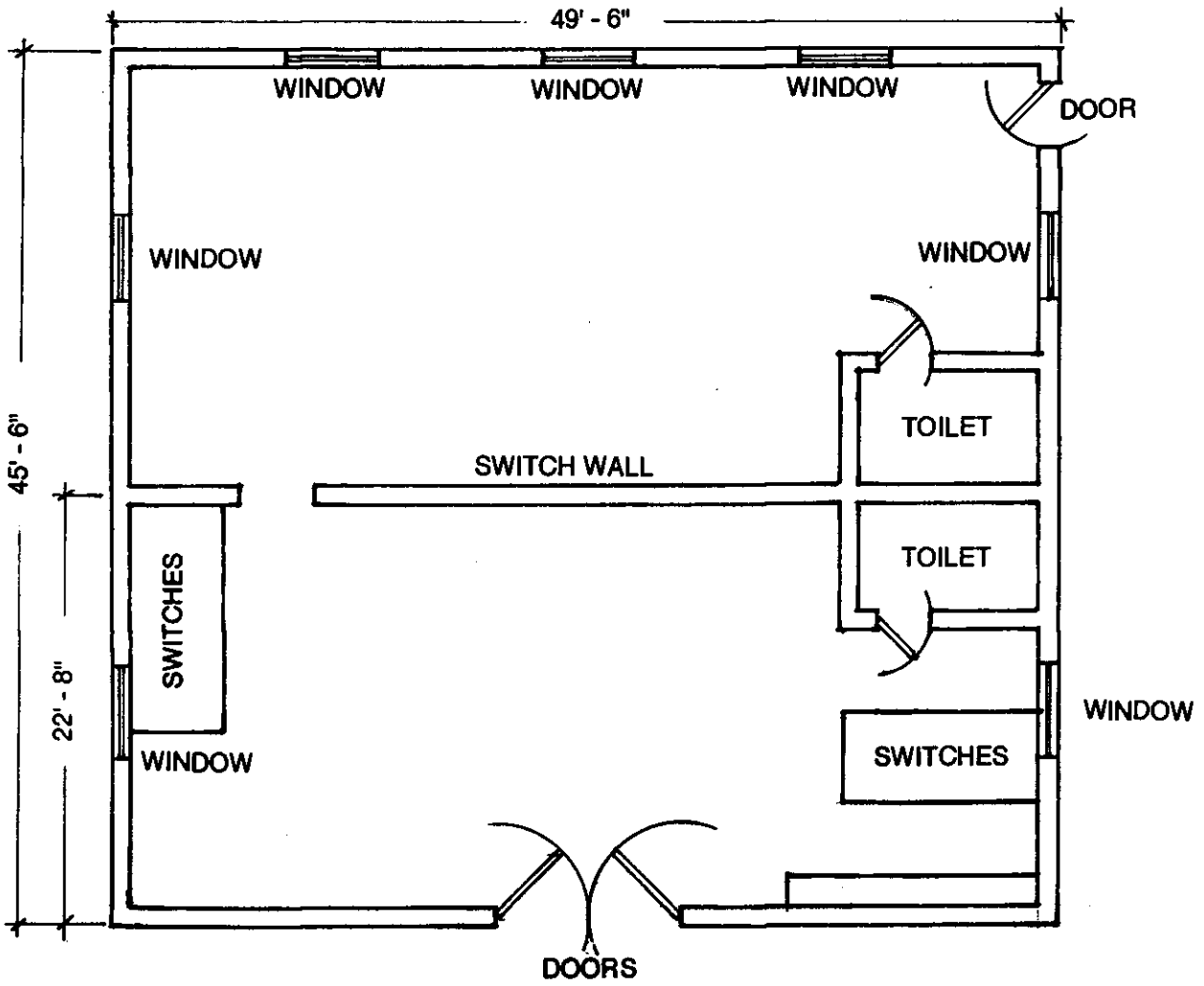
REGIONAL LOCATION

SAN FERNANDO SWITCHING STATION
Historic American Buildings Survey
Los Angeles Department of Water and Power

EDAW

no scale

Exhibit 1



Source: EDAW

LEVEL ONE FLOOR PLAN

SAN FERNANDO SWITCHING STATION
Historic American Buildings Survey
Los Angeles Department of Water and Power

EDAW
no scale

Exhibit 3

OLIVE SWITCHING STATION
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